NOT FOR PUBLICATION

UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY

E.I. DU PONT DE NEMOURS & COMPANY, Plaintiff, v. MACDERMID PRINTING SOLUTIONS, L.L.C., Defendant.	CIVIL ACTION NO. 06-3383 (MLC) **MEMORANDUM OPINION**

COOPER, District Judge

Plaintiff, E.I. DuPont de Nemours & Company ("DuPont"), commenced this action against the defendants, MacDermid, Inc. and MacDermid Printing Solutions, L.L.C. ("MacDermid"), alleging, inter alia, that MacDermid (1) manufactured and sold flexographic printing elements that directly infringe one or more claims of DuPont's United States Patent No. 6,171,758 B1 (the "'758 Patent"), (2) encouraged others to directly infringe one or more claims of DuPont's '758 Patent, (3) manufactured and sold flexographic printing elements to be used, treated, processed, or developed in a manner that directly infringes one or more claims of DuPont's United States Patent No. 6,773,859 B2 (the "'859 Patent"), and (4) encouraged others to directly infringe one or more claims of DuPont's '859 Patent. See D. Colo. Civ. Action No. 06-816, dkt. entry no. 1, Compl. at ¶¶ 6-9, 14-17.[1]

[1] DuPont commenced this action on April 28, 2006 in the United States District Court for the District of Colorado. On July 17, 2006, the United States District Court for the District of Colorado granted the parties' joint motion to transfer the action to this Court. See id., dkt. entry no. 30, 7-17-06 Order.

The parties present three motions for summary judgment: (1) MacDermid's motion for summary judgment of noninfringement and invalidity of the '859 Patent (the "455 Motion") (see dkt. entry no. 455, Notice of 455 Mot.); (2) DuPont's motion for summary judgment of infringement of the '859 Patent (the "464 Motion") (see dkt. entry no. 464, Notice of 464 Mot.); and (3) MacDermid's motion for summary judgment of noninfringement of the '759 Patent (the "459 Motion") (see dkt. entry no. 459, Notice of 459 Mot.). The Court held oral argument on the motions on November 22, 2013, December 10, 2013, December 16, 2013, and January 27, 2014. For the reasons stated herein, the Court will: (1) grant the 455 Motion in part and deny in part as moot; (2) deny the 464 Motion as moot; and (3) grant the 459 Motion.

BACKGROUND

I. Overview of Flexographic Printing Plates

Flexographic printing plates are used to print images on packaging materials such as flexible films, paper, labels, and cups, as well as newspapers and magazines. (Dkt. entry no. 31, DuPont Appl. for Prelim. Inj. ("DuPont 31 Br.") at 4.) A flexographic printing plate consists of a transparent base layer, a photopolymerizable layer, and a cover sheet. (Id. at 5.) The base layer provides support for the other layers. (Id.) The photopolymerizable layer contains elastomeric binders, monomers, photoinitiators and other additives, and thus, once it is developed, it has a raised surface that depicts the image to be printed. (Id.) A digital flexographic printing plate has an additional infrared ablation layer, which is laminated directly onto the surface of the photopolymerizable layer. (Id.; see dkt. entry no. 44, MacDermid Br. in Opp'n to DuPont Appl. for Prelim. Inj. ("MacDermid 31 Opp'n") at 3 (noting that the

"modern" method of developing a printing plate involves adding a UV absorbing layer directly to the photopolymerizable layer rather than having to place a phototool on top of it).)

To develop an image on a digital flexographic printing plate, the printer must first peel off the cover sheet. (DuPont 31 Br. at 5.) Next, a computer generated infrared laser is moved across the surface of the infrared ablation layer to remove portions of this layer depending upon the digitized image. (Id. at 5-6; MacDermid 31 Opp'n at 3.) As a result, the desired image is transferred onto the infrared ablation layer and a photonegative or "in-situ mask" of the image to be printed is created. (DuPont 31 Br. at 6; MacDermid 31 Opp'n at 3.) The photopolymerizable layer is then exposed to UV light through the in-situ mask. (DuPont 31 Br. at 7; MacDermid 31 Opp'n at 3.) The portions of the infrared ablation layer that were not removed by the infrared laser block parts of the photopolymerizable layer from the UV light. (DuPont 31 Br. at 7; MacDermid 31 Opp'n at 3-4.) The parts of the photopolymerizable layer that are exposed to the UV light polymerize and become insoluble to certain chemical solvents. (DuPont 31 Br. at 7; MacDermid 31 Opp'n at 4 ("Where the UV absorbing layer was removed by the laser, the UV light will cure and harden the photopolymerizable layer.").) Finally, the printing plate can be washed with chemical solvents and scrubbed with mechanical brushes so that the remaining portions of the infrared ablation layer and the unpolymerized parts of the photopolymerizable layer are removed. (DuPont 31 Br. at 7.) This leaves a raised surface or "printing relief" that can be used to print the desired image. (Id.) Because the flexographic printing plates absorb the chemical solvents, they must undergo a rigorous, lengthy, and costly drying process. (Id. at 9.) This drying step is labor intensive and requires large and expensive drying and emissions control equipment. (Id.)

MacDermid contends that there are a number of alternative methods for removing the remaining portions of the infrared ablation layer and the uncured parts of the photopolymerizable layer, including (1) using water and brushes, (2) using an "air knife" or forced air, and (3) heating the plate to soften the uncured parts and then removing the softened uncured parts with an absorbent material or blotter (i.e., thermal development). (MacDermid 31 Opp'n at 4.) DuPont asserts that its scientists and engineers invented the thermal development process, whereas MacDermid asserts that "DuPont invented nothing." (See DuPont 31 Br. at 7; MacDermid 31 Opp'n at 4.)

II. The '859 Patent

The '859 Patent discloses "a process for preparing a flexographic printing plate from a photosensitive element having a photopolymerizable layer and a thermally removable layer on the photopolymerizable layer." (Dkt. entry no. 192, 11-19-08 Mem. Op. at 7.) It is comprised of 54 claims, but only claims 1 and 51 are independent. Claim 1 states:

> **1.** A process for making a flexographic printing plate comprising:
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> 1) providing a photosensitive element comprising: at least one photopolymerizable layer on a support comprising an elastomeric binder, at least one monomer, and a photoinitiator, and at least one thermally removable layer disposed above the photopolymerizable layer, the thermally removable layer selected from the group consisting of
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> (a) an actinic radiation opaque layer comprising (i) at least one infrared absorbing material, (ii) a radiation opaque material, wherein (i) and (ii) can be the same or different, and at least one binder having a softening or melting temperature less than 190°C.;
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> (b) a layer of a composition comprising at least one binder and filler, wherein the binder is less than 49% by weight based on the total weight of the binder and filler, and
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> (c) a layer of particulate material having particle size of less than 23 micrometers;

> 2) imagewise exposing the photopolymerizable layer to actinic radiation forming polymerized portions and unpolymerized portions; and
> 3) thermally treating the element of step 2) by heating to a temperature sufficient to remove the thermally removable layer and to remove the unpolymerized portions of the photopolymerizable layer and form a relief.

(Id. at 7-8.)

DuPont introduced its commercial embodiment of claim 1, Digital Cyrel® FAST ("Cyrel"), in 2001. DuPont asserts that Cyrel pioneered and first commercialized the "growing and commercially successful market for the thermal development of digital flexographic printing plates." In fact, DuPont states that it sold more than $90 million worth of digital flexographic printing plates that can be thermally developed between 2001 and August of 2006. DuPont also notes that in 2003, Cyrel received the Flexographic Technical Association's (the "FTA") "Technical Innovation Award." (Id. at 8.) MacDermid launched its LAVA products in April 2004. It installed a thermal processing system and began selling its LAVA flexographic printing plates in November 2004. MacDermid has invested over $4 million in the research and development of its thermal development technology, and has spent over $797,000 marketing its LAVA products. (Id. at 8-9.) DuPont tested and analyzed MacDermid's MLT and Magma printing plates in late 2005. DuPont contends that

> MacDermid markets its LAVA thermal processing system and equipment and MLT and Magma flexographic printing plates as providing the same benefits and having the same features as DuPont's Cyrel® FAST thermal technology, describes its infringing technology with a numbering system designed to draw a close parallel in the minds of customers with DuPont's FAST thermal process equipment, and has even sought a license from DuPont to use the patented technology it is now offering to customers.

(Id. at 9.) DuPont further contends that in addition to copying DuPont's patented thermal technology, MacDermid has also adopted the same naming conventions for its equipment –

DuPont calls its thermal processing equipment "Cyrel® FAST TD 4260" and MacDermid calls its thermal processing equipment "LAVA 4260." (Id.)

III. The Prosecution History of the '859 Patent

The original application for the '859 Patent was filed with the United States Patent and Trademark Office ("PTO") on February 27, 2002. (Id.) The patent application listed "Roxy Ni Fan, et al." as the inventors and "a process for making a flexographic printing plate and a photosensitive element for use in the process" as the patent's title. (Id.) The applicants filed an Information Disclosure Statement with the application, which informed the PTO about the existence of (1) United States Patent Nos. 3,060,024, 3,060,025, 3,264,103, 4,429,027, 5,175,072 ("Martens '072 Patent"), 5,262,275 ("Fan '275 Patent"),[2] 5,607,814, 5,719,009, 5,840,463, and 5,888,697, and (2) European Patent Nos. 0665469, 0665471, and 0741330 (the "Fan '330 Publication"). (Id. at 9-10) Also, the applicants filed a Supplemental Information Disclosure Statement on February 24, 2003 disclosing the existence of United States Patent Application No. 2002/0009672 ("Daems '672 Patent Application"). (Id. at 10.)[3]

The PTO issued an Office Action in which the patent examiner (1) allowed claims 51-54, (2) rejected claims 1-7, 9-10, 14-16, 18, 28-30, 33-42, and 45-50, and (3) objected to claims 8, 11-13, 17, 19, 31-32, and 43-44. (Id.) The patent examiner stated that he was rejecting claims 1-7, 9-10, 14-16, 18, 28-30, 33-42, and 45-50 because they were either

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[2] We refer to these patents using the name of the first patentee or applicant listed on the Information Disclosure Statement in conjunction with the patent's last three numbers.

[3] The Daems '672 Patent Application is "[n]on-provisional of provisional application No. 60/214,016, filed on Jun. 26, 2000." (Id.) The Daems '672 Patent Application was filed on January 24, 2002, approximately one month before the '859 Patent application was filed. (Id.)

anticipated under 35 U.S.C. § ("Section") 102(a) and (e), or obvious under Section 103(a) in light of the Daems '672 Patent Application. (Id.) The patent examiner explained that the Daems '672 Patent Application:

> discloses processes using elements comprising photopolymerizable layers containing elastomeric binders overcoated with thermally removable layers comprising binders, infrared absorbing materials and opaque materials within the scope of the thermally removable layers of paragraph "a" of the instant claims. The thermally removable layer is thermally imaged to form a mask and then the element is photopolymerized and thermally treated to remove unpolymerized areas and the thermally removable opaque layers. If [the Daems '672 Patent Application] do[es] not anticipate the instant claims, then it would at least be obvious to one skilled in the art to select thermally removable layers, photopolymerizable layers, thicknesses and processing temperatures from the generic disclosure in [the Daems '672 Patent Application] in order to carry out the processes of [the Daems '672 Patent Application].

(Id.) The patent examiner also explained that claims 8, 11-13, 17, 19, 31-32, and 43-44 were only objectionable because they depended on rejected claims, and thus, they would be allowed if written in independent form. (Id. at 10-11.)

The applicants responded to the Office Action on March 29, 2004. In addition to the response, the applicants submitted a declaration by co-inventor Adrian Lungu, which showed that the claimed invention had been completed in the United States on or before June 9, 1999. (Id. at 11.) The applicants thus asserted that the Daems '672 Patent Application was "no longer available for use as a reference in rejecting the present claims" because the claimed invention predated the filing of the Daems '672 Patent Application. (Id.) Accordingly, the applicants (1) alleged that the claimed invention was not anticipated or obvious to one skilled in the art, and (2) requested that the patent examiner reconsider the rejection of certain claims. (Id.)

The PTO then issued a Notice of Allowability, which allowed claims 1 through 51. The form used to transmit the issue fee and publication fee, which was received by the PTO on April 22, 2004, lists DuPont as the assignee of the '859 Patent. The PTO issued the '859 Patent on August 10, 2004. (Id.)

IV. The '758 Patent

The PTO issued the '758 Patent, entitled "Dimensionally Stable Flexographic Printing Plates," on January 9, 2001. (See dkt. entry no. 459-3, Ex. DD, '758 Patent.) The abstract states:

> The present invention is a flexographic printing plate having a very low degree of thermal distortion during development. This flexographic printing plate comprises a dimensionally stable substrate and an image bearing relief layer, wherein the thermal distortion of the flexographic printing plate in both the machine and the transverse directions is less than 0.02% when the plate is developed at temperatures in the range from about 100° C. to about 180° C.

(Id.)

The '758 Patent is comprised of 21 claims, but only claims 1 and 19 are independent. (See id. at cols. 8-10.) Claim 1 states:

> **1.** A photosensitive plate suitable for use as a flexographic printing plate comprising a dimensionally stable, flexible, polymeric substrate and a photosensitive elastomer layer, wherein the plate has a thermal distortion in both the machine and the transverse directions which is less than 0.03% when the plate is exposed to actinic radiation and, after exposure, is developed at temperatures between 100 and 180° C.

(Id. at col. 8, lines 18-25.)

V. The Prosecution History of the '758 Patent

The application leading to the '758 Patent was filed in November 1994. (Id.) In an Office Action mailed in March 1995, the PTO examiner found the claims subject to a

restriction or election requirement. (Dkt. entry no. 310, 3-15-10 Mem. Op. & Order at 4.) After the applicants filed a response in April 1995, the examiner rejected the claims in an Office Action mailed in June 1995. The applicants traversed the rejections in a response filed in August 1995. The examiner finally rejected the claims in a November 1995 Office Action. The applicants submitted an amendment and response in January 1996. (Id.) They then appealed to the Board of Patent Appeals and Interferences ("Appeals Board"). (Id. at 4-5.)

The applicants submitted a brief defending the patent claims, which was received in April 1996. The examiner also submitted an answer defending the rejections. In a decision mailed on June 29, 2000, the Appeals Board disagreed with the examiner and allowed the patent to be issued. (Id. at 5.) The '758 Patent was issued on January 9, 2001.

DISCUSSION

I. Applicable Legal Standards

A. Summary Judgment Standard

Motions for summary judgment are governed by Rule 56, which provides that the Court "shall grant summary judgment if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed.R.Civ.P. 56(a). The movant has the initial burden of proving the absence of a genuinely disputed material fact relative to the claims in question. Celotex Corp. v. Catrett, 477 U.S. 317, 330 (1986). Material facts are those "that could affect the outcome" of the proceeding, and "a dispute about a material fact is 'genuine' if the evidence is sufficient to permit a reasonable jury to return a verdict for the non-moving party." Lamont v. New Jersey, 637 F.3d 177, 181 (3d Cir. 2011) (quoting Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248 (1986)). The

burden on the movant may be discharged by pointing out to the district court that there is an absence of evidence supporting the nonmovant's case. See Celotex, 477 U.S. at 323.

If the movant demonstrates an absence of genuinely disputed material facts, then the burden shifts to the nonmovant to demonstrate the existence of at least one genuine issue for trial. See Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp., 475 U.S. 574, 586–87 (1986); Williams v. Borough of W. Chester, Pa., 891 F.2d 458, 460–61 (3d Cir. 1989). "Where the record taken as a whole could not lead a rational trier of fact to find for the non-moving party, there is no genuine issue for trial." Matsushita Elec. Indus. Co., 475 U.S. at 587 (internal quotation marks omitted). The nonmovant cannot, when demonstrating the existence of issues for trial, rest upon argument; the nonmovant must show that such issues exist by referring to the record. See Fed.R.Civ.P. 56(c)(1).

When determining whether a genuine dispute of material fact exists, the Court must view the evidence in the light most favorable to the nonmovant and draw all reasonable inferences in that party's favor. Scott v. Harris, 550 U.S. 372, 380 (2007); Wishkin v. Potter, 476 F.3d 180, 184 (3d Cir. 2007). If the nonmovant fails to demonstrate that at least one genuine dispute exists for trial, then the Court must determine whether the movant is entitled to judgment as a matter of law. See McCann v. Unum Provident, 921 F.Supp.2d 353, 357 (D.N.J. 2013). "A movant is entitled to judgment as a matter of law if, at trial, no reasonable jury could find for the non-moving party." Id.

B. Infringement Standard

Determination of a claim of infringement involves a two-step inquiry. First, the patent claim is construed, a question of law in which the scope of the asserted claim is defined.

Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed.Cir. 1995). Second, the claim, as construed, is compared to the allegedly infringing product to determine whether the product contains every limitation contained in the claim or the substantial equivalent of any limitation not literally present. Laitram Corp. v. Rexnord, Inc., 939 F.2d 1533, 1535 (Fed.Cir. 1991) (noting that "the failure to meet a single limitation is sufficient to negate infringement of the claim").

There is a "'heavy presumption' that a claim term carries its ordinary and customary meaning." CCS Fitness Inc. v. Brunswick Corp., 288 F.3d 1359, 1366 (Fed.Cir. 2002). The ordinary and customary meaning of a claim term is the meaning a "person of ordinary skill in the art in question" would give to such term on the effective filing date of the patent application. Phillips v. AWH Corp., 415 F.3d 1303, 1313 (Fed.Cir. 2005). Such a person is deemed to interpret the claim term in the context of the entire patent, including the specification. Id. A claim term should generally be given its ordinary meaning unless the patentees "clearly set forth a definition of the disputed claim term in either the specification or prosecution history." CCS Fitness Inc., 288 F.3d at 1366. Thus, words in a claim are generally given their ordinary and customary meanings in the absence of a contrary indication in the patent specification or file history. Wolverine Worldwide, Inc. v. Nike, Inc., 38 F.3d 1192, 1196 (Fed.Cir. 1994).

When interpreting an asserted patent claim, the Court should look first to the intrinsic evidence of record, which includes the patent's claims, specification, and complete prosecution history. Markman, 52 F.3d at 979. Such intrinsic evidence is the most significant source of the legally operative meaning of disputed claim language. Vitronic Corp. v.

Conceptronic, Inc., 90 F.3d 1576, 1583 (Fed.Cir. 1996). In reviewing this intrinsic evidence, the Court considers the context in which a term is used both within the claim at issue and within the claims that are not at issue. Phillips, 415 F.3d at 1314. Further, the Court must interpret claim terms in light of the specification. Id. at 1315 (noting that the specification is "highly relevant" to claim construction and usually dispositive).

The Court, in addition to reviewing the specification, should also consider the patent's prosecution history. Id. at 1317; Graham v. John Deere Co., 383 U.S. 1, 33 (1966) ("It is, of course, well settled that an invention is construed not only in the light of the claims, but also with reference to the file wrapper or prosecution history in the Patent Office."). The doctrine of "prosecution history estoppel" requires that a patent's claims be interpreted in light of all PTO proceedings that occurred during the patent application process. Festo Corp. v. Shoketsu Kinzoku Co., Ltd., 535 U.S. 722, 733 (2002) (noting that "prosecution history estoppel" ensures that claims are interpreted in light of those claims that were cancelled or rejected). Accordingly, the prosecution history is useful in claim construction because it demonstrates how the inventor limited the invention during the course of the patent prosecution, and thus, narrowed the scope of the ultimately patented product. Phillips, 415 F.3d at 1317. Nevertheless, because the prosecution history reflects the ongoing negotiations between the inventor and the PTO, it is often less clear and less useful than the specification. Id.

The ordinary meaning of claim language as understood by a person of skill in the art will be readily apparent to a lay judge in some instances, after reviewing the intrinsic evidence, and claim construction will involve simply applying the widely accepted meanings of commonly understood words. Id. at 1314. In such circumstances, general purpose dictionaries

may be helpful. Id. However, "heavy reliance on the dictionary divorced from the intrinsic evidence risks transforming the meaning of the claim term to the artisan into the meaning of the term in the abstract, out of its particular context, which is the specification." Id. at 1321.

C. Standards Governing Patent Validity

A patent is presumed to be valid, and each of its claims are presumed valid independent of the validity of other claims. 35 U.S.C. § 282(a). A party asserting the invalidity of a patent or one or more of its claims must establish such invalidity by clear and convincing evidence. Bausch & Lomb, Inc. v. BarnesHind/Hydrocurve, Inc., 796 F.2d 443, 446 (Fed.Cir. 1986).

1. Anticipation

35 U.S.C. § 102 states that a claimed invention is invalid for anticipation where, inter alia,

> (a) the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention; or
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> (b) the claimed invention was described in a patent . . . , or in an application for patent published or deemed published . . ., in which the patent or application, as the case may be, names another inventor and was effectively filed before the effective filing date of the claimed invention.

35 U.S.C. § 102(a)-(b).

"Although anticipation under 35 U.S.C. § 102 is a question of fact, it may be decided on summary judgment if the record reveals no genuine dispute of material fact." Golden Bridge Tech., Inc. v. Nokia, Inc., 527 F.3d 1318, 1321 (Fed.Cir. 2008). The test for anticipation is the same two-step process used in determining infringement: a court must, first,

construct the claims, and second, compare the patented invention to the prior art. See Int'l Seaway Trading Corp. v. Walgreens Corp., 589 F.3d 1233, 1239 (Fed.Cir. 2009); Bristol–Myers Squibb Co. v. Ben Venue Labs., Inc., 246 F.3d 1368, 1378 (Fed.Cir. 2001) ("[T]hat which would literally infringe if later anticipates if earlier.").

2. Obviousness

A patent is invalid for obviousness "if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains." 35 U.S.C. § 103.

The Court must employ an expansive and flexible approach to the question of obviousness. KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 401 (2007). In determining whether a claimed invention was obvious, the Court must objectively consider (1) the scope and content of the prior art, (2) the differences, if any, between the prior art and the claims at issue, and (3) the level of ordinary skill in the pertinent art. Graham v. John Deere Co. of Kansas City, 383 U.S. 1, 17 (1966). The Court should also analyze secondary considerations of nonobviousness such as the patented invention's commercial success, whether the patent satisfied a long-felt but unmet need, and whether the invention received industry praise. See id. at 17-18. "It is black letter law that the ultimate question of obviousness is a question of law." Richardson-Vicks Inc. v. Upjohn Co., 122 F.3d 1476, 1479 (Fed.Cir. 1997). The issue turns on whether the claimed subject matter, as a whole, would have been obvious to a person of ordinary skill at the time the invention was made. See KSR Int'l Co., 550 U.S. at 420. "Where . . . the content of the prior art, the scope of the patent claim, and the level of ordinary

skill in the art are not in material dispute, and the obviousness of the claim is apparent in light of these factors, summary judgment is appropriate." Id. at 427.

When a patent combines elements known in the prior art "with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the combination is obvious." Id. at 417 (quotation and citation omitted); see id. at 416 ("[W]hen a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result."). When the prior art teaches away from a particular combination of known elements, however, the successful combination of those elements is less likely to be obvious. Id. That a patent combines elements known in the prior art in accord with their established functions does not, alone, make the patent obvious. Id. at 418. Rather, the Court should also "identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does." Id.

A patent may be proved obvious by showing that the combination of known elements was obvious to try. Id. at 421. "When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp." Id. Thus, a predictable success from one of these options likely results from ordinary skill and common sense, rather than innovation. Id. In such a situation, that the combination of known elements was obvious to try may sufficiently show that the combination was obvious under Section 103. Id.

3. Best Mode

A patent specification "shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention." 35 U.S.C. § 112(a). Compliance with the best mode requirement is a question of fact. Green Edge Enters., LLC v. Rubber Mulch Etc., LLC, 620 F.3d 1287, 1296 (Fed.Cir. 2010). The sufficiency of the disclosure of the best mode is determined as of the filing date. Id. A patent is invalid if its inventor fails to comply with the best mode requirement.

Determining compliance with the best mode requirement is a two-pronged inquiry. "First, the court must determine whether, at the time the patent application was filed, the inventor possessed a best mode of practicing the claimed invention." Id. "This inquiry is wholly subjective and addresses whether the inventor must disclose any facts in addition to those sufficient for enablement." U.S. Gypsum Co. v. Nat'l Gypsum Co., 74 F.3d 1209, 1212 (Fed.Cir. 1996); see also Green Edge Enters., 620 F.3d at 1296 (stating that first prong is subjective and "focuses on the inventor's personal preferences as of the application's filing date"). "Second, if the inventor has a subjective preference for one mode over all others, the court must then determine whether the inventor 'concealed' the preferred mode from the public." Green Edge Enters., 620 F.3d at 1296. The second prong examines – in the event the inventor had a best mode of practicing the claimed invention – "whether the specification adequately disclosed what the inventor contemplated as the best mode so that those having ordinary skill in the art could practice it." See U.S. Gypsum Co., 74 F.3d at 1212. This inquiry is objective and "depends upon the scope of the claimed invention and the level of skill in the relevant art." See Green Edge Enters., 620 F.3d at 1296.

II. The '455 Motion

MacDermid argues that it is entitled to summary judgment because: (1) each of claims 1, 6, 22, 30, 33, 36, 39, 40, 41, and 48 (the "asserted claims of the '859 Patent") are invalid as obvious; (2) United States Patent Nos. 5,925,500 (the "'500 Patent") and 5,322,761 (the "'761 Patent") anticipated various asserted claims of the '859 Patent; (3) each asserted claim of the '859 Patent is invalid for a failure to disclose the best mode; (4) no reasonable juror could find MacDermid directly or indirectly infringes the asserted claims of the '859 Patent; and (5) DuPont cannot meet its burden of proof on damages. (See generally dkt. entry no. 457, MacDermid 455 Br.)

A. Obviousness Analysis

MacDermid contends that the asserted claims are invalid as obvious, as "[e]ach asserted claim is an obvious combination of known elements performing their respective function." (Id. at 20.) That is, "the asserted claims include a method for creating a flexographic printing plate that combined two known technologies – digital imaging and thermal development." (Id. at 20-21.) MacDermid further argues:

> Digital imaging had been known and described in the patent literature since at least 1993 and had been commercially available in this country since 1997. Thermal development was first described in the patent literature in 1966 and had been commercialized one month before the time of invention. The combination simply selected the best techniques amongst very limited options to be used in one sequential process. No change or alteration needed to be made to the digital plates or the thermal process to thermally develop digital plates. Additionally, the prior art described heat and wash development as alternative and interchangeable development methods. Further, it was known that non-meltable particles were thermally removable because the particles get "carried along" with "wicked" polymer. Moreover, the prior art contained disclosures explicitly suggesting the combination.

(Id. at 21.)

1. The Scope and Content of the Prior Art

The Court considers the scope and content of the prior art as it existed on June 9, 1999. (See 11-19-08 Mem. Op. at 11 (finding that claimed invention had been completed in the United States on or before June 9, 1999).) Prior art is limited to analogous references "from the same field of endeavor" as the claimed invention; if not within the same field of endeavor, a reference may be prior art if it is reasonably pertinent to the particular problem the inventor of the claimed invention was addressing. See In re Bigio, 381 F.3d 1320, 1325 (Fed.Cir. 2004).

a. The Martens '072 Patent

The PTO issued the Martens '072 Patent, entitled "Flexographic Printing Plate Process," on December 29, 1992. (See dkt. entry no. 455-2, Robinson Decl., Ex. 11, Martens '072 Patent (listing the filing date as July 26, 1990).) The "Description of the Invention" section of the Martens '072 Patent states that the

> process of the present invention for producing a flexographic printing plate comprises providing a relief imageable element comprising a flexible substrate which can transmit ionizing radiation, said substrate having on one surface thereof a radiation hardenable composition in a thickness of at least 0.3 mm, imagewise irradiating said composition to harden the composition in irradiated areas, contacting said imagewise irradiated layer with an absorbent layer which can absorb unirradiated composition when it has been heated between 40°C. and 200°C., heating said composition layer to a temperature between 40°C. and 200°C. while it is in contact with said absorbent layer, said temperature being sufficiently high so as to enable said composition in unirradiated areas to be absorbed by said absorbent layer (usually by flowing into said absorbent layer), allowing at least 75% by weight of said composition (which is unirradiated) in unirradiated areas to be absorbed by said absorbent layer, and removing said absorbent layer and said at least 75% by weight of composition from said flexible substrate, the process further comprising the step of irradiating said composition layer through the substrate with ionizing radiation to harden some but less than all of said composition layer and thereby form a hardened zone

> between said flexible substrate and unhardened composition before said at least 5% of said composition is allowed to be absorbed by said absorbent layer.

(Id. at col. 5, lines 7-34.) The Martens '072 Patent thus describes a process for developing flexographic printing plates using heat, rather than solvents. (See id. col. 10, lines 29-38; col. 13, lines 62-67 (stating that the invention describes a process through which flexographic printing plates are developed without use of solvents).) This was an analog (not digital) thermal plate that had a release layer. (See dkt. entry no. 602, 12-16-13 Hr'g Tr. at 7:12-15.)

The specification of the Martens '072 Patent explains that after imagewise exposure to actinic radiation, the uncured portions of the elastomer layer must be removed. (Id. at col. 12, lines 42-45.) The specification instructs that the uncured portions of the elastomer be removed by heating the uncured elastomer to a temperature sufficient to cause melting and pressing an absorbent sheet material against the uncured elastomer. (Id. at col. 12, lines 45-58.) The contact between the molten uncured elastomer and the absorbent sheet material results in "a transfer of the uncured elastomer from the planar contiguous layer to the absorbant [sic] sheet material." (Id. at col. 12, lines 56-64.) The absorbent sheet material is then removed, leaving the relief structure. (Id. at col. 12, lines 61-64.)

b. The Fan '275 Patent

The PTO issued the Fan '275 Patent, entitled "Flexographic Printing Element Having an IR Ablatable Layer and Process for Making a Flexographic Printing Plate," on November 16, 1993. (See dkt. entry no. 455-4, Robinson Decl., Ex. 14, Fan '275 Patent (listing the filing date as August 7, 1992).) The "Summary of the Invention" section of the Fan '275 Patent states that:

> The present invention relates to a photosensitive printing element used for preparing flexographic printing plates comprising
>
> (a) a support,
>
> (b) a photopolymerizable layer comprising an elastomeric binder, at least one monomer and an initiator having sensitivity to non-infrared actinic radiation, said layer being soluble, swellable or dispersible in a developer solution prior to exposure to actinic radiation,
>
> (c) at least one barrier layer which is soluble, swellable, dispersible or liftable in the developer solution for the photopolymerizable layer prior to exposure to actinic radiation, and
>
> (d) at least one layer of infrared radiation sensitive material which is substantially opaque to actinic radiation wherein the infrared-sensitive material is ablatable from the surface of the barrier layer upon exposure to infrared laser radiation.
>
> The invention further relates to a process for making a flexographic printing plate, which comprises:
>
> (1) imagewise ablating layer (d) of the element described above with infrared laser radiation to form a mask;
>
> (2) overall exposing the photosensitive element to actinic radiation through the mask; and
>
> (3) treating the product of step (2) with at least one developer solution to remove (i) the infrared-sensitive material which was not removed during step (1), (ii) the areas of the barrier layer which were not exposed to actinic radiation, and (iii) the areas of the photopolymerizable layer (b) which were not exposed to actinic radiation.

(Id. at col. 2, lines 13-44.) The Fan '275 Patent thus relates to flexographic printing plates comprised of a support, a photopolymerizable layer, and an ablation layer, as well as the process for making such plates. (See id.; see also id. at col. 2, lines 49-54 (explaining that invention combines "the convenience and sensitivity of infrared laser imaging with conventional photopolymerizable compositions to produce flexographic printing plates with known good printing quality quickly, economically, and by digital imaging means").) According to DuPont, the Fan '275 Patent was the first digital imaging patent. (See 12-16-13 Hr'g Tr. at 8:10-23.)

The specification of the Fan '275 Patent generally describes the process of the invention as involving: (1) the formation of a mask by imagewise ablating the infrared radiation sensitive material comprising layer (d); (2) "overall exposing the photosensitive element to actinic radiation through the mask"; and (3) developing the product of step (2) using a developer solution. (Id. at col. 8, lines 60-68; see also id. at col. 9, line 4 to col. 10, line 58.) The specification instructs that the infrared sensitive layer, layer (d), "should be capable of absorbing infrared radiation and should be opaque to actinic radiation." (Id. at col. 5, lines 56-58.) Layer (d) also may include a binder, if desired. (Id. at col. 5, lines 59-60.) The specification further explains that during the imagewise ablating step, "material in the infrared-sensitive layer is removed, i.e., ablated, in the areas exposed to the infrared laser radiation." (Id. at col. 9, lines 19-21.) The photosensitive element is then overall exposed to actinic radiation through the mask, resulting in both polymerized and unpolymerized portions. (Id. at col. 9, lines 32-43.)

c. The '761 Patent

The PTO issued the '761 Patent, entitled "Flexographic Printing Plate Having a Vanadium Oxide Antistatic Coating Layer," on June 21, 1994. (See Robinson Decl., Ex. 12, '761 Patent (listing the filing date as June 4, 1992).) The "Abstract" section of the '761 Patent states: "A flexographic printing plate comprising in the following order: a flexible substrate, a photohardenable composition, and a colloidal vanadium oxide antistatic layer. The antistatic layer provides protection from static induced defects until and after the flexographic plate is processed." (Id.) The "Detailed Description" section of the '761 Patent states, in pertinent part:

> The present invention relates to a flexographic printing plate comprising a, radiation hardenable composition (radiation polymerizable, radiation curable, or radiation cross-linkable) as a layer on a flexible substrate, the substrate also containing an antistatic layer of vanadium oxide above the radiation curable layer. Other antistatic layers may be used in combination with the vanadium oxide antistatic layer. The plate is imagewise irradiated to harden the radiation curable (hardenable) composition in irradiated areas. Said imagewise irradiated layer may then be wash developed or preferably contacted with an absorbent layer which can absorb (or wick) unradiated composition when the composition has been heated between 40° and 200° C. The composition layer is heated so that it is at a temperature between 40° and 200° C. while in contact with said absorbent layer, the temperature being sufficiently high to enable said composition in unirradiated areas to flow into said absorbent layer. At least 75% of said composition in unirradiated areas in contact with said absorbent layer is absorbed by said absorbent layer, and by removing said absorbent layer, said at least 75% of composition from unirradiated areas is removed from said flexible substrate. The at least 75% removal is accomplished in at least one and up to ten steps of contact and heating with an absorbent material. . . . The actual temperatures will vary with the specific substrate and composition used. Preferably at least 80% of the unirradiated composition is removed from the areas heated in contact with the absorbent layer. More preferably at least 90 or at least 95% is removed. The hardening or curing step of the process (by irradiation) can also act to increase the adhesion of the composition to the substrate.

(Id. at col. 7, line 65 to col. 8, line 23; col. 8, lines 42-49.)

The '761 Patent thus describes a process where (1) a flexographic printing plate is imagewise exposed, and (2) the imagewise irradiated layer is then developed with either solvents or heat. (See id.)

d. The Fan '330 Publication

The European Patent Office published the Fan '300 Publication, entitled "Flexographic element having an infrared ablatable layer and process for making a flexographic printing plate," on November 24, 1999. (See dkt. entry no. 455-5, Robinson Decl., Ex. 15, Fan '300 Publ'n at 1 (listing filing date as February 23, 1996).) The "Field of

the Invention" section of the Fan '300 Publication states: "This invention relates to a process for making a flexographic printing plate from a photosensitive printing element, particularly a flexographic element having an infrared radiation ablatable layer capable of being selectively removed by a laser beam." (Id. at 2, lines 5-9.)

The "Summary of the Invention" section of the Fan '300 Publication states:

> In accordance with this invention there is provided
>
> (1) a photosensitive element for use as a photopolymer printing plate, comprising:
>
> (a) a support;
>
> (b) at least one layer of a photopolymerizable material on the support, the photopolymerizable material comprising at least one elastomeric binder, at least one monomer, at least one initiator having sensitivity to non-infrared actinic radiation, and optionally at least one plasticizer, wherein at least one of the monomer and the optional plasticizer is a low molecular weight material; and
>
> (c) at least one infrared ablation layer which is ablatable by infrared radiation and substantially opaque to non-infrared actinic radiation, said infrared ablation layer being in direct contact with the at least one layer of photopolymerizable material (b) and having a surface opposite the photopolymerizable layer (b) capable of being exposed to laser ablation, the infrared layer comprising:
>
> (i) at least one infrared absorbing material;
>
> (ii) a radiation opaque material, wherein (i) and (ii) can be the same or different; and
>
> (iii) at least one binder which is substantially incompatible with at least one of the low molecular weight materials of layer (b) and which is selected from polyamides, copolymers of ethylene and vinyl acetate, hydroxyalkyl cellulose, cellulose acetate butyrate, polybutyral, cyclic rubbers, nitroglycerine, polyacetals, polyimides, polycarbonates, polyesters, polyalkylenes, polyphenylene ethers, polyethylene oxides, polylactones, and combinations thereof; and optionally,

> (d) a coversheet;
>
> wherein the infrared ablation layer is tack-free or substantially tack-free on the photopolymerizable layer and is ablatable from the surface of the photopolymerizable layer upon exposure to infrared laser radiation after removal of the coversheet, if present, and
>
> (2) a process for making a flexographic photopolymer printing plate from the photosensitive element described in (1) above.

(Id. at 4, lines 16-46.) Thus, the Fan '300 Publication relates to flexographic photopolymer printing plates comprised of a support, a coversheet, a photopolymerizable layer, and an ablation layer, as well as the process for making such plates. (See id.)

2. The Differences Between the Prior Art and the Claims at Issue

The Fan '275 Patent and the Martens '072 Patent were known to persons skilled in the art in 1999, the year in which the claimed invention was made. (See dkt. entry no. 46-6, Mahanna Decl., Ex. 2, part 5, at G-1 to G-5, 3-29-04 Resp. & Lungu Decl. (stating that the claimed invention was conceived and reduced to practice in 1999).) See KSR Int'l Co., 550 U.S. at 424 (noting that the District Court was correct to perform the obviousness analysis as of the time the patentee designed the subject matter in the claim). The '859 Patent describes the same technology and processes pertaining to digital imaging of flexographic printing plates as disclosed in the Fan '275 Patent, including (1) a photosensitive element comprising a support, a photopolymerizable layer, and a third layer consisting of an infrared absorbing material, a radiation opaque material, and a binder, (2) ablation of an imagewise ablatable layer using infrared laser radiation to form a mask, (3) overall exposure of the photopolymerizable layer to actinic radiation through the mask, resulting in polymerized and unpolymerized portions of the photopolymerizable layer, and (4) development by removing

the unpolymerized portions of the photopolymerizable layer. (Compare Robinson Decl., Ex. 13, '859 Patent at col. 5, lines 57-61, col. 11, lines 13-41, col. 17, lines 21-60, col. 20, lines 22-47, and col. 43, lines 14-36, with Robinson Decl., Ex. 14, Fan '275 Patent at col. 2, lines 13-44, 55-58, col. 5, lines 56-62, col. 9, lines 4-53, and col. 10, lines 21-24.) The '859 Patent furthermore discloses the same process of thermal development of flexographic printing plates as was disclosed in the Martens '072 Patent. Specifically, both patents disclose the use of heat to form the relief by removing the unpolymerized portions of the photopolymerizable layer after imagewise exposure to actinic radiation. (Compare Robinson Decl., Ex. 13, '859 Patent at col. 20 lines 22-67, col. 21, lines 1-55, and col. 43, lines 37-40, with Robinson Decl., Ex. 11, Martens '072 Patent at col. 5, lines 7-34, and col. 12, lines 42-67.)

The parties dispute whether it would have been obvious to one skilled in the art to essentially "unite old elements" by combining the digital imaging technology disclosed in the Fan '275 Patent with the thermal development technology described in the Martens '072 Patent. See KSR Int'l Co., 550 U.S. 415-16 ("[A] patent for a combination which only unites old elements with no change in their respective functions . . . obviously withdraws what is already known into the field of its monopoly and diminishes the resources available to skillful men." (internal quotation marks omitted)). The digital imaging technology and the thermal development technology described in the '859 Patent perform the same functions they had been known to perform and yield a predictable result. See id. at 417 (emphasizing that a combination of known elements "with each performing the same function it had been known to perform and yield[ing] no more than one would expect from such an arrangement" is obvious (quotation and citation omitted)). The flexographic printing plate is digitally imaged

using laser radiation on an imagewise ablatable layer, exposed to actinic radiation through the mask, and then developed using known thermal development processes. (See Robinson Decl., Ex. 13, '859 Patent at col. 17, line 21 to col. 18, line 2; col. 18, line 50-55; col. 20, line 29 to col. 21, line 48.)

That said, DuPont argues that

> [n]either DuPont nor its expert, Dr. Cakmak, disputes that the prior art contained various "digital solvent" references (e.g., the [Fan] '275 Patent, the [Fan] '330 Publication, DuPont's DPU plate, and MacDermid's CBU plates) that disclosed steps 1(a) and 2 of claim 1 of the '859 Patent. None, however, disclosed or suggested the "thermal developing" step; rather, the prior art taught forming a relief only by washout with solvents or aqueous solutions. Similarly, neither DuPont nor Dr. Cakmak dispute that the prior art contained various "analog thermal" references (e.g., the [Martens] '072 Patent, the '761 Patent, and the '471 Patent) that disclosed one or more layers above a photopolymerizable layer. However, the prior art did not teach or suggest the compositions recited in parts 1(a)-(c) of claim 1 of the '859 Patent, nor did the prior art teach or suggest that the layers above the photopolymerizable layer were thermally removable. Indeed, at the time the invention was made, the only "analog thermal" development process still required a solvent wash to clean up the floor and remove fine particles.

(See dkt. entry no. 504, DuPont 455 Opp'n Br. at 19 (footnotes omitted).)

DuPont further argues that "[a] person of ordinary skill in the art would have had no reason to believe thermal development of a digital plate would yield a useful result." (Id. at 20.) DuPont states that in May through July of 1999, "there were only two commercially available ways to develop flexographic printing plates – washing with solvent solutions and washing with aqueous (i.e., water-based) solutions." DuPont thus argues that, because DuPont did not commercialize its analog thermal development process until the following

year, "'thermal' was not a 'known option' for commercial development of even analog plates at the time of the invention." (See id.)[4]

DuPont also argues that MacDermid's assertion – that "the claimed invention not only represents a simple substitution but it constitutes a combination of the best options available at the time" – is incorrect, as "one of ordinary skill would not have known that industry demand for digital imaging could best be met by thermal development." (Id. at 21.) DuPont insists this is the case because "there still existed questions about whether thermal development could provide all of the stated environmental and time savings benefits." (Id. at 21-22.) DuPont moreover insists that "the solvent-based market was still growing at an accelerated rate [in 1999] and there were no existing thermal customers so one of ordinary skill would have been unmotivated to introduce a technology to its digital customers that provided few tangible benefits over the solvent processing workflow that these customers were already using." (Id. at 22 (internal quotation marks omitted).)

DuPont further argues that its expert, Dr. Mukerrem Cakmak, concluded that "one of ordinary skill would not have expected that the combination of digital solvent references, and their laser ablation layers, would be thermally removable" and that "the references relied upon by MacDermid's experts provide no support for their conclusion that there existed a high degree of predictable success that this combination would work." (Id.)

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[4] DuPont notes that "thermal development techniques known at the time still required a final solvent wash to 'clean up' the plate, further reducing the motivation to 'try' thermal development because one of ordinary skill would not have expected it to solve the environmental and production time problems associated with solvent-based processes." (Id. at 21.)

DuPont finally argues that "the prior art did not contain any teachings of alternative development methods for an analog plate that would have suggested to one of ordinary skill in the art that existing digital solvent plates could be alternatively thermally developed." (Id. at 22-23.)

The KSR Court has instructed that

> a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.

KSR Int'l Co., 550 U.S. at 418 (emphasis added). The KSR Court additionally noted that a patent claim can be proven obvious merely by showing that the combination of elements was "obvious to try." See id. at 421. The KSR Court stated:

> When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try might show that it was obvious under [35 U.S.C.] § 103.

(Id.)

The Court finds that there are several reasons that would have prompted a person of ordinary skill to combine digital imaging technology and thermal development technology in the same way as the '859 Patent. In May 1999, there existed only two imaging techniques

(analog and digital) and four development techniques (solvent, water, air knife, and heat plus a blotter). (See MacDermid 455 Br. at 31.)[5] As this Court previously found, digital imaging has several benefits over analog imaging, including that phototools are expensive and time-consuming to make. (See 11-19-08 Mem. Op. at 68-69.) At the time of the invention, digital plates were only commercially developed by solvents. (See MacDermid 455 Br. at 31.) Thermal development conversely has multiple advantages over solvent development, including that it is faster, less expensive, and does not create environmental issues regarding the use and disposal of solvents. (See 11-19-08 Mem. Op. at 69; see also MacDermid 455 Br. at 31.) A person of ordinary skill in the field therefore would be motivated to combine digital imaging and thermal development in one sequential process to gain the benefits of both technologies. (See 11-19-08 Mem. Op. at 69.) See generally KSR Int'l Co., 550 U.S. at 418 (emphasizing importance of identifying "a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does").

As was the case in KSR, here there was a "finite number of identified, predictable solutions," thus, "a person of ordinary skill ha[d] good reason to pursue the known options within his or her technical grasp." See KSR Int'l Co., 550 U.S. at 421; see also Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc., 520 F.3d 1358, 1364 (Fed.Cir. 2008) (stating that "KSR posits a situation with a finite, and in the context of the art, small or easily traversed,

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[5] DuPont argues that thermal was not a "known option" for commercial development at the time of the invention. (See DuPont 455 Opp'n Br. at 20.) The Court, however, notes that one of ordinary skill in the art is presumed to be aware of prior art beyond that of which is commercialized. See McNeil-PPC, Inc. v. L. Perrigo Co., 337 F.3d 1362, 1369-70 (Fed.Cir. 2003).

number of options that would convince an ordinarily skilled artisan of obviousness").[6]

MacDermid moreover describes in detail why digital imaging and thermal development were not only known options, but the best options available at the time:

> As of May 1999, digital imaging was well known, commercially successful, and growing. In a July 1997 article, two named inventors (Fan/Taylor) emphasized "digital plates print finer highlights, while retaining deep shadows, and with lower dot gain than conventional printing throughout the tonal range. Color reproduction on press is brighter, more dynamic, and can achieve a larger process color gamut." ([Dkt. entry no. 457-10, Robinson Decl., Ex. 23, Fan/Taylor Article]; [dkt. entry no. 457-2, Robinson Decl., Ex. 2, Rule 30(b)(6) Dep. of DuPont] at 113:4-9). Digital plates are a "truly superior product" gaining "worldwide acceptance" and "[o]rders for digital plate materials and digital plate exposure devices are steadily increasing." Id. Therefore here, as in KSR, there existed a marketplace at the time of invention that created a "strong incentive" for the ordinarily skilled artisan to expand the use, availability and marketability of digital plates. KSR, 550 U.S. at 424 ("Technological developments made it clear that engines using computer-controlled throttles would become standard."); Muniauction, Inc. v. Thomson Corp., 532 F.3d 1318, 1326-27 (Fed. Cir. 2008) (public speech touted desirability of World Wide Web and motivated combination).
>
> At the same time, May 1999, thermal development had been known since the 1960's, 3M patents detailed its utility and benefits in the 1990's, and DuPont commercialized an analog-thermal system at a U.S. tradeshow in April 1999, one month earlier. DuPont detailed the benefits of thermal over solvent at this tradeshow, and characterized thermal as revolutionary" and "breakthrough technology." ([Dkt. entry no. 457-13, Robinson Decl., Ex. 35, CMM 99 Press Briefing]; [dkt. entry no. 455-12, Robinson Decl., Ex. 37, Cyrel Article]; [Rule 30(b)(6) Dep. of DuPont] at 174:8-176:18).
>
> As a result, there existed at the time of invention a marketplace with known design incentives that created a "strong incentive" to expand the use and

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[6] DuPont argues that the commercial failure of analog thermal plates taught away from combining digital and thermal technologies. (See 12-16-13 Hr'g Tr. at 50:22 – 51:2; 67:24 – 68:3.) The Court, however, agrees with MacDermid that the Martens '072 Patent contains an example that describes an "excellent rendition" of an image using an analog thermal plate. (See Martens '072 Patent at col. 21, line 19 to col. 22, line 2.)

> availability of the "revolutionary" thermal process, by combining it with the "truly superior" digital plates. One only needed to place a "truly superior" digital plate (after imagewise exposure) into a "revolutionary" thermal process. Alternatively, one needed to only upgrade an analog-thermal plate in a known manner to become a digital-thermal plate. Given the design incentives and market demands at the time of invention, one of ordinary skill would have had not just "a reason" – but good and compelling reasons – to combine digital imaging with thermal development. Ecolab, Inc. v. FMC Corp., 569 F.3d 1335, 1349-50 (Fed. Cir. 2009) (using known technique to improve known process was obvious); Leapfrog Enterprises, Inc. v. Fisher-Price, Inc., 485 F.3d 1157, 1161-62 (Fed. Cir. 2007) (upgrading device to employ modern electronics was obvious).

(MacDermid 455 Br. at 33-34.) The Court adopts the analysis set forth by MacDermid regarding the market forces. Because of these market forces, the finite number of options, and the benefits of both digital imaging and thermal development, the Court finds that the combination of the two technologies would be obvious to one of ordinary skill in the art.

3. The Level of Ordinary Skill in the Pertinent Art

The obviousness analysis is conducted from the perspective of a person of ordinary skill in the prior art. See 35 U.S.C. § 103. The hypothetical person of ordinary skill "is an objective legal construct who is presumed to be aware of all the relevant prior art." Janssen Pharmaceutica N.V. v. Mylan Pharm., Inc., 456 F.Supp.2d 644, 653 (D.N.J. 2006), aff'd, 233 Fed.Appx. 999 (Fed.Cir. 2007). The person of ordinary skill "is also a person of ordinary creativity, not an automaton." KSR Int'l Co., 550 U.S. at 421. MacDermid defers to DuPont's conclusion that one of ordinary skill in the prior art "possesses a B.S. degree in chemistry or chemical engineering and 3-5 years experience with photopolymer printing plate formulations and applications, or an individual having an advanced technical degree in another discipline and 3-5 years experience with photopolymer printing plate formulations

and applications." (See dkt. entry no. 455-2, Robinson Decl., Ex. 8, Cakmak '859 Patent Expert Report at ¶ 22; MacDermid 455 Br. at 26.)

4. Secondary Considerations of Non-obviousness

Secondary considerations of objective evidence of non-obviousness include evidence of long-felt but unmet need, failures of others, commercial success, copying, unexpected results, and industry acclaim. As MacDermid has succeeded in establishing a prima facie case of obviousness, the Court will consider these indicia of non-obviousness. DuPont relies on three secondary considerations of objective evidence of non-obviousness: (1) commercial success; (2) long-felt but unmet need; and (3) industry praise. (See DuPont 455 Opp'n Br. at 23-27.)[7]

a. Commercial Success

DuPont argues that its Cyrel – the commercial embodiment of the invention claimed in the '859 Patent – "was an immediate commercial success, generating more than $90 million in sales from its introduction in 2001 through 2006." (See id. at 24.) DuPont further argues that

> [s]ales in 2002 grew by an astonishing 988% percent and continued to grow thereafter, by 242% in 2003, by 350% in 2004, by 148% in 2005, and by 31% through August 2006. Sales of DuPont's thermally developable digital printing plates (i.e., those described and claimed in the '859 Patent) grew at a much faster rate than sales of traditional solvent-developed plates, evidencing that the increased sales were driven by the novel thermal development capability and not overall grown [sic] in the flexography market.

(Id.)

[7] DuPont only mentions these three secondary considerations in its brief. The Court notes that DuPont discussed other secondary considerations at oral argument. While the Court considered all of the secondary considerations proffered by DuPont both in its brief and at oral argument, the Court finds it necessary to remark only on those discussed infra.

MacDermid conversely argues that commercial success is probative only if there is a nexus between the claimed invention and the commercial success. (MacDermid 455 Br. at 39-40.) MacDermid states that DuPont cannot establish a nexus because, inter alia, DuPont is unable to show that Cyrel's success is not the result of features of the claimed invention already in the prior art. (See id. at 40-41.)

The Court first notes that DuPont's argument sensationalizes Cyrel's commercial success. DuPont offers the declaration of the Director of Sales and Marketing for DuPont's Color Proofing Business in North America, Robert M. Zoelle. (See DuPont 455 Opp'n Br. at 24 (citing dkt. entry no. 32, Zoelle Decl. at ¶¶ 11-25).) DuPont insists that Cyrel "was an immediate commercial success," yet Zoelle himself conceded in his declaration that "marketplace acceptance [of Cyrel] was not immediate." (See Zoelle Decl. at ¶ 18.) In fact, it was only through "work[ing] with initial customers to install [Cyrel] equipment . . . and provid[ing] them with [Cyrel] material for evaluation," that DuPont was able to "develop a market for thermally developed plates" "over time." (See id.)

DuPont also provides many growth figures, but fails to put those figures into context. DuPont claims that Cyrel has generated "more than $90 million in sales," but DuPont does not document more revealing statistics, such as its profit. (See DuPont 455 Opp'n Br. at 24.) DuPont further illustrates Cyrel's growth figures, but fails to mention that all thermally developed plates – including others besides Cyrel – "account for only about 13% of the overall market in the United States for flexographic printing plates." (See Zoelle Decl. at ¶ 19.)[8]

[8] The Court notes that Zoelle's declaration was filed in 2006, so thermally developed plates may have gained additional market share by the date of this memorandum opinion.

The Court finds that the evidence proffered by DuPont regarding Cyrel's commercial success is insufficient to overcome MacDermid's strong showing of obviousness. DuPont provides only simple sales figures, which do little to assist the Court in gauging Cyrel's commercial success. The Court also notes that DuPont's market share in the flexographic printing plate market reduces the impact that any probative evidence could have on establishing commercial success. See Geo. M. Martin Co. v. Alliance Mach. Sys. Int'l LLC, 618 F.3d 1294, 1305 (Fed.Cir. 2010). DuPont does not adequately establish a nexus between the claimed invention and its purported commercial success, other than utilizing attorney argument to briefly explain that the benefits customers may realize through their adoption of Cyrel. (See DuPont 455 Opp'n Br. at 25.)

b. Long-Felt but Unmet Need

DuPont argues that because digital imaging of flexographic printing plates was first patented in 1992, there was a seven year period where digital plates were not being thermally developed. DuPont argues that the '859 Patent solved this problem and brought the benefits of thermal processing to digital plates. (See DuPont 455 Opp'n Br. at 25.) DuPont concludes that after the commercial success of Cyrel, MacDermid acknowledged that "the market has spoken and the need is clear." (See 12-16-13 Hr'g Tr. at 15-20.) Nothing about DuPont's argument, however, demonstrates that there was a palpable need for digital thermal plates and that such a need existed for a long time. The Court therefore finds that DuPont fails to establish a long-felt but unmet need.

c. Industry Praise

DuPont argues that it received industry awards and praise from the FTA, as it was the 2003 recipient of the FTA's "Technical Innovation Award." (See DuPont 455 Opp'n Br. at 25.) DuPont states that it received the award "for the environmental improvements, speed, and superior quality of its new [Cyrel] system." (Id.) MacDermid argues that the FTA's "Technical Innovation Award" is awarded on the basis of innovation and not invention. (See MacDermid 455 Br. at 51-52.)

While the Court finds that the FTA award may be at least some evidence of industry praise, it is vastly insufficient to overcome MacDermid's strong showing of obviousness. As stressed by MacDermid, the FTA's "Technical Innovation Award" awards innovative technology in the flexographic industry. (See id. at 52.) According to the award's entry guidelines and application, "[t]he definition of innovation is 'the act of introducing something new.' It should not be confused with invention, which is the act of producing or contriving something previously unknown. So the application, marketing and development of new or existing technology would be considered innovative technology." (Dkt. entry no. 455-16, Robinson Decl., Ex. 62, Flexographic Technical Innovation Award Brochure). As such, this example of industry praise is limited to praising Cyrel as an innovation, not an invention. The Court also notes that – as with the commercial success factor – DuPont's market share in the overall flexographic printing product industry somewhat reduces the impact that this evidence could have on establishing industry praise. See Geo. M. Martin Co., 618 F.3d at 1305.

B. Conclusion on Obviousness

The Court finds that MacDermid has carried its burden of proving by clear and convincing evidence that the asserted claims of the '859 Patent are invalid as obvious over the prior art references. The Court will therefore grant MacDermid's motion for summary judgment of invalidity of those claims of the '859 Patent. The Court will issue an appropriate order and judgment.

III. The 464 Motion

Because the Court finds that the '859 Patent is invalid on the grounds of obviousness under 35 U.S.C. § 103, the Court need not consider DuPont's motion for summary judgment of infringement of the '859 Patent. The Court will therefore deny the 464 Motion as moot. The Court will issue an appropriate order and judgment.

IV. The 459 Motion

MacDermid moves for summary judgment of noninfringement of claims 1, 3, 4, 7, and 8 (the "asserted claims of the '758 Patent") of the '758 Patent. (See Notice of 459 Mot; dkt. entry no. 460, MacDermid 459 Br.) DuPont asserts that MacDermid's Digital CST plate literally infringes each of the asserted claims of the '758 Patent. (See dkt. entry no. 503, DuPont 459 Opp'n Br. at 1.)

MacDermid states that "the Court is presented with the narrow question of whether a genuine issue of material fact exists with respect to literal infringement of the asserted claims by Digital CST," and that "[n]o such issue even remotely exists with respect to this contrived

claim." (MacDermid 459 Br. at 2.)[9] MacDermid notes that DuPont has no evidence Digital CST meets two requirements of the asserted claims. (Id.) That is, MacDermid argues that (1) Digital CST does not include "a dimensionally stable, flexible, polymeric substrate," as construed by the court, and (2) the undisputed evidence shows Digital CST distorts more than 0.03% in at least one direction when developed at temperatures between 100° and 180° Celsius. (See id. at 2-3.)

In regard to the first argument, MacDermid contends that the adhesive drying process used by its contractor, Kimoto, does not meet the Court's construction because it is not a "special annealing process" that "controls" the "dimensional stability" of the substrate.[10] Instead, MacDermid argues that Kimoto's adhesive drying process is an essential aspect of the process of bonding the photosensitive elastomer layer to the substrate, explicitly excluded by the Court's construction of the '758 Patent. MacDermid argues that Dr. James Rice's opinion does not create a genuine issue of material fact as to whether the Kimoto adhesive drying process is a "special annealing process" under the Court's claim construction. (See generally id.)

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[9] MacDermid states that while DuPont initially claimed all products capable of thermal development infringed the asserted claims, DuPont now alleges that only Digital CST infringes claims 1, 3, 4, 7, and 8 of the '758 Patent. (See MacDermid 459 Br. at 1.) MacDermid states that DuPont is no longer asserting that MacDermid's Digital MAX, Digital MVP, Digital MLT, and Digital Magma flexographic printing plates infringe the claims of the '758 Patent. (See id.) MacDermid further contends that when the case was filed in April 2006, it only sold Digital MLT and Digital Magma. (See id.) Digital CST, MacDermid states, was not sold until 2007 and did not exist when the Complaint was filed. (See id.)

[10] Kimoto's adhesive drying process is explained infra.

DuPont asserts, in response, that: (1) the Court's claim construction does not preclude a finding that Kimoto's adhesive drying process is a "special annealing process"; (2) MacDermid's attempt to read claim 1 of the '758 Patent to require less than 0.03% distortion at every point in the claimed range of 100° to 180° Celsius goes far beyond the Court's claim construction and is a misreading of the claim; (3) MacDermid's attempt to conflate adhesive drying of the Digital CST plates by Kimoto into MacDermid's manufacturing process of bonding the photopolymer to the substrate finds no support in the Court's construction; and (4) MacDermid wrongly presumes that the "special annealing process" required by the Court's construction must "control" thermal distortion. (See DuPont Opp'n Br. at 1-4.)[11]

In its Reply Brief, MacDermid supplements its initial arguments with the following points: (1) adhesive drying is not "special" or "annealing"; (2) adhesive drying is an essential step in the multi-step process of bonding the substrate to the photosensitive layer; (3) a "dimensionally stable" substrate must have its dimensional stability controlled by a special annealing process; and (4) according to DuPont's expert's test results, Digital CST distorts more than 0.03% in at least one direction when developed at 170° Celsius (i.e., between 100-180° Celsius). (See dkt. entry no. 524, MacDermid 459 Reply Br.)

A. Background – MacDermid's Digital CST Plate

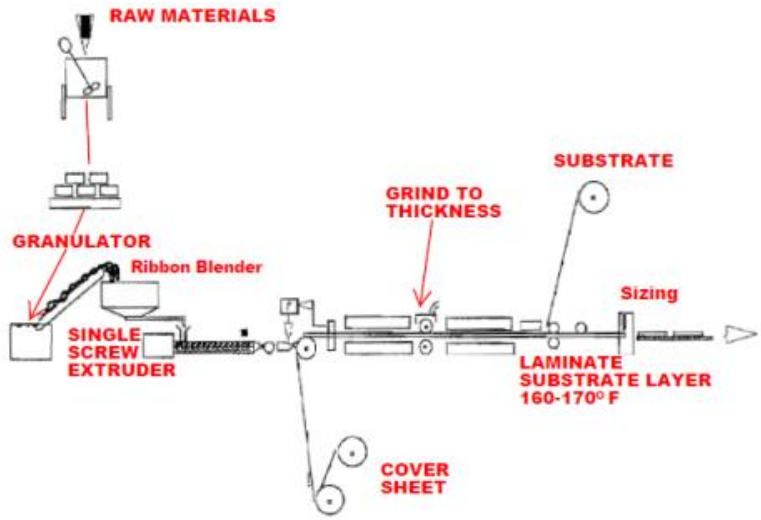
DuPont alleges that MacDermid infringes claims 1, 3, 4, 7, and 8 of the '758 Patent by making, selling, and using its Digital CST plates in the United States. (See DuPont 459

[11] DuPont also initially argued that MacDermid's attacks on the admissibility and reliability of Dr. Rice's opinions are unfounded, but this Court already ruled on this issue. (See generally dkt. entry no. 608, 6-30-14 Order.)

Opp'n Br. at 5.) The Court adopts MacDermid's description of the manufacturing process of its Digital CST plate:

> Digital CST is manufactured in three gauges, 45, 67 and 107 mils. The manufacturing process for Digital CST begins with the manufacture of the polymeric substrate. Digital CST 45 uses Melinex 943 (7 mil) for its flexible polymeric substrate. Melinex 943 is a polyethylene terepthalate ("PET") film manufactured by DuPont-Teijin. Melinex 943 has been manufactured in this country with the same process since 1982. DuPont-Teijin does not subject Melinex 943 to a special annealing process.
>
> Digital CST 67 and 107 use Hostaphan 4407 (5 mil) for the flexible polymeric substrates. Hostaphan 4407 is a PET film manufactured by Mitsubishi Polyester Film, Inc. Hostaphan 4407 has been manufactured with the same process in this country since 1982. Mitsubishi does not subject Hostaphan 4407 to a special annealing process.
>
> MacDermid manufactures Digital CST on what is referred to as Line A. Line A products require application of a primer layer (PVDC) and an adhesive layer (ADB10R) onto the substrate before the substrate is placed on the manufacturing line. Because MacDermid does not have the capability of applying the primer and adhesive on Line A, it contracts with Kimoto to perform this step in the bonding process. Thus, once the PET films that are used for Digital CST are manufactured by DuPont-Teijin or Mitsubishi, they are shipped to Kimoto to be coated with the primer and adhesive layers.
>
> On Line 2, Kimoto coats a primer (PVDC) onto the substrate at Coating Station No. 1, and then dries the primer in Dryer No. 1. On the same line, immediately thereafter, Kimoto coats an adhesive (ADB10R) onto the dried primer at Coating Station No. 2 and dries the adhesive in Dryer No. 2. Dryer No. 2 has six zones operating with air temperatures ranging from 168 - 250° F (75.5 to 121.1° C). Line 2 was installed in 1992 and has been operational ever since.
>
> After coating and drying the primer and adhesive layers onto the PET film, Kimoto ships the film to MacDermid where MacDermid completes the manufacture of Digital CST on Line A. There, on Line A, MacDermid laminates the photosensitive layer to the adhesive coated surface of the substrates. Specifically, melted photopolymer is first extruded onto the coversheet as it is wound around a casting roll. The photopolymer is cooled

> and ground by an abrasive roll to the desired thickness. Next, the PET substrate, which is already coated with PVDC and ADB10R, is laminated to the photopolymer surface by two rollers heated to between 160 and 170° F. A schematic of Line A is below:



(MacDermid 459 Br. at 4-7. (internal citations and footnote omitted).) MacDermid also notes that "DuPont contends the 'special annealing' purportedly occurs only in one zone of Kimoto's Dryer No. 2, specifically Zone 3. The air temperature of Zone 3 is 250° F." (Id. at 6 n.1.)

B. Infringement Analysis

As the Court discussed supra, the determination of a claim of infringement involves a two-step inquiry. First, the patent claim is construed, a question of law in which the scope of the asserted claim is defined. Markman, 52 F.3d at 979. Second, the claim, as construed, is compared to the allegedly infringing product to determine whether the product contains every limitation contained in the claim or the substantial equivalent of any limitation not literally present. Laitram Corp., 939 F.2d at 1535 (noting that "the failure to meet a single limitation is sufficient to negate infringement of the claim").

1. The Asserted Claims of the '758 Patent and the Court's Construction

Step one in the infringement inquiry involves construing the patent claim. Markman, 52 F.3d at 979. The '758 Patent is composed of 21 claims, but only claims 1 and 19 are independent. (See '758 Patent at cols. 8-10.) Claim 1 states:

> **1.** A photosensitive plate suitable for use as a flexographic printing plate comprising a dimensionally stable, flexible, polymeric substrate and a photosensitive elastomer layer, wherein the plate has a thermal distortion in both the machine and the transverse directions which is less than 0.03% when the plate is exposed to actinic radiation and, after exposure, is developed at temperatures between 100 and 180° C.

(Id. at col. 8, lines 18-25.)

Claim 1 requires that the photosensitive plate include "a dimensionally stable, flexible, polymeric substrate." (See id. at col. 8, lines 19-20.) The Court previously construed "dimensionally stable" to mean:

> A flexible polymeric substrate whose dimensional stability has been controlled through a special annealing process, namely an annealing process that: (1) is in addition and subsequent to the heat treating steps associated with manufacturing the polymeric film, (2) is not the process of bonding the photosensitive elastomer layer to the polymeric substrate, and (3) comprises: (i) heating the substrate to a temperature above its glass transition temperature but below its melting temperature and at or greater than the temperature to which the substrate is later subjected during thermal development, (ii) at tensions of less than 200 psi, and (iii) for a time greater than the time required to bring the film to the annealing temperature, such that a specially annealed substrate has less thermally induced distortion than a non-specially annealed substrate.

(3-15-10 Mem. Op. & Order at 11-12, 20, 40.)

2. Comparison of Construed Claim to Allegedly Infringing Product

The Court then moves to step two of the infringement inquiry, which involves comparing the claim, as construed, to the allegedly infringing product to determine whether the product contains every limitation contained in the claim or the substantial equivalent of any limitation not literally present. Laitram Corp., 939 F.2d at 1535. The Court finds that MacDermid did not infringe the asserted claims of the '758 Patent because Kimoto's adhesive drying process is not a "special annealing process." See id. (holding that "the failure to meet a single limitation is sufficient to negate infringement of the claim"); see also 3-15-10 Mem. Op. & Order at 11-12, 20, 40 (noting that to be dimensionally stable, substrate must undergo special annealing process).

MacDermid argues that Kimoto's adhesive drying process cannot satisfy the Court's construction because:

> (1) drying an adhesive layer onto a substrate is not a "special annealing process," (2) adhesive drying is an essential aspect of what the Court specifically excluded, namely the process of bonding the photosensitive elastomer layer to the substrate, and (3) the undisputed evidence shows Kimoto does not "control" the dimensional stability of the substrates.

(MacDermid 459 Br. at 10.) DuPont responds by arguing that

> Kimoto's adhesive drying process is a "special annealing process" because (1) it is in addition and subsequent to the heating steps associated with the manufacture of the substrate (a fact that MacDermid does not dispute); (2) it is not the process of bonding (a fact that MacDermid disputes); and (3) it satisfies the temperature, tension, and time conditions (a fact that MacDermid disputes only on the basis that DuPont's evidence allegedly is inadmissible).

(DuPont 459 Opp'n Br. at 10.)

During claim construction, this Court held that "the process of bonding the photosensitive elastomer layer to the polymeric substrate" is not a "special annealing process." (See 3-15-10 Mem. Op. & Order at 40.) As such, if Kimoto's adhesive drying is part of the bonding process, then it cannot be a "special annealing process."

In construing "dimensionally stable" during claim construction, the Court looked to "clear and unambiguous statements regarding the annealing process made in both the specification and over the course of the prosecution history." (See 3-15-10 Mem. Op. & Order at 20.) The Court noted that

> the patent specification repeatedly highlights the importance of annealing. The specification even states that "[t]he desirability of such semicrystalline polymers arises from the discovery that dimensional stability of these polymer substrates may be controlled through a special annealing process." ('758 Patent at col. 2, lines 55-59.) In addition to mentioning different annealing methods, the specification explains this annealing process, focusing on temperature, tension, and time. (Id. at col. 2, lines 59-67, col. 3, lines 1-26.) The specification then provides four examples, in which the crucial distinguishing feature of the testing was whether the tested samples were in fact subjected to annealing. (Id. at col. 5, lines 26-66, col. 6, lines 1-67, col. 7, lines 1-67, col. 8, lines 1-16.)

(Id. at 16.) The '758 Patent not only describes controlling the dimensional stability of polymer substrates through a special annealing process, but it also mentions an optional step that may be taken to "surface treat[] [the substrate] for better adhesion." (See '758 Patent at col. 3, line 66 to col. 4, line 5.) The '758 Patent states:

> The substrate optionally may be surface treated for better adhesion. Examples of surface treatments include coating the surface with MSOL (an amorphous silica with silane coupling agent) as described in U.S. Pat. No. 5,204,219 [the "'219 Patent"] or corona treating the surface followed by use of a primer such as an aziridene, as described in U.S. Pat. No. 5,187,044 [the "'044 Patent"].

(Id.) Both of the enumerated patents illustrate using heat to dry an adhesive coating onto a

substrate. (See dkt. entry no. 459-3, Ex. II, '044 Patent at col. 17, line 61 to col. 18, line 9; dkt. entry no. 459-3, Ex. JJ, '219 Patent at col. 7, line 42 to col. 8, line 13.) The '758 Patent therefore differentiates between annealing the substrate and heating it for "better adhesion."

MacDermid also argues that "[t]he ['758 Patent] examples confirm adhesion techniques are not the invention's 'special annealing process.'" (MacDermid 459 Br. at 14.) MacDermid specifically points to example 3 in the '758 Patent, which discusses flexographic printing plates that were produced using various PEN film substrates. (See '758 Patent at col. 6, lines 62-63.) In example 3, three plates were annealed at 170° C. for five minutes, and four plates were not annealed. (See id. at 62-67.) All seven plates were coated with a primer as disclosed by the '044 Patent. The results demonstrate that "the plates produced from the annealed PEN films have lower distortion than do plates produced with unannealed substrates." (Id. at col. 7, lines 21-24.) The Court considered this during claim construction and found it significant to construing "dimensional stability." (See 3-15-10 Mem. Op. & Order at 16.)

MacDermid also argues that:

> The Court's [claim construction] ruling also found the prosecution history showed the applicants (DuPont) had distinguished the claimed invention by emphasizing the "whole notion of annealing." (Id., p. 17[.]) The Court marshaled the prosecution history and found applicants repeatedly rejected the Examiner's position that Martens and Prioleau taught the claimed invention. (Id., p.17-20[.]) Indeed, even though Martens and Prioleau created plates by drying adhesives onto the substrate before lamination, the applicants repeatedly argued the plates of Martens and Prioleau were not subjected to the "critical," "further" and "important" annealing step that "enables one to achieve the very low degrees of distortion."
>
> For example, the Court noted the applicants responded to the examiner's obviousness rejection, by stating:

> The concept that all flexographic printing plates, including those disclosed in Martens and Prioleau, will have some "inherent" degree of thermal distortion, does not overcome Martens' and Prioleau's lack of teaching or suggestion as to the importance or desirability of dimensional stability. There is no basis for the inference that the inherent degree of distortion in Martens' and Prioleau's plates is in the range claimed. In fact, the Examples in the specification show that absent a critical annealing step, many polymeric films, including PEN and PET films, and plates made from such films do not meet the low distortion levels claimed in the present invention.

(MacDermid 459 Br. at 15-16 (citing 3-15-10 Mem. Op. & Order at 17-18).)[12] The Court concurs with MacDermid's analysis and finds that this weighs against DuPont's contention that adhesive drying constitutes a "special annealing process."

In arguing that Kimoto's adhesive drying process is not part of the bonding process, DuPont proffers the following statement made by Dr. Rice in his expert report:

> After purchasing the primer and adhesive coated film from Kimoto, MacDermid applies a photosensitive elastomer layer to the film. The step of bonding the photosensitive elastomer layer to the film is performed by MacDermid. Thus, the application of a primer and adhesive to the film by Kimoto is not the process of bonding the photosensitive elastomer layer to the polymeric substrate.

(Dkt. entry no. 460-9, Robinson Decl., Ex. K, part 1, Expert Report of Dr. James Rice at ¶ 16 (footnotes omitted).) Dr. Rice's sole foundation for this statement is MacDermid's answer to DuPont's Interrogatory No. 17, wherein MacDermid allegedly did not mention the Kimoto adhesive drying process. (See id. (citing to MacDermid's Supp. Resp. to Third Set of

[12] MacDermid provides several additional examples of DuPont emphasizing – in the prosecution history – the importance of the annealing process. (See MacDermid 459 Br. at 16-17.)

Interrogs.).) There is, however, no support for this statement in MacDermid's answer to DuPont's Interrogatory No. 17, as MacDermid explicitly mentions in its answer that the PET substrate is "coated with an adhesive layer." (See dkt. entry no. 503-1, Ossola Decl., Ex. D, MacDermid's Supp. Resp. to Third Set of Interrogs. at 8.) The Court finds that Dr. Rice's opinion does not create a genuine issue of material fact as to whether the Kimoto adhesive drying process is a "special annealing process" under the Court's claim construction.

Although Dr. Rice proffered a conclusory opinion that Kimoto's adhesive drying process is not part of the bonding process, he testified that the primer and the adhesive are placed on the substrate by Kimoto "[f]or later bonding of the photosensitive layer." (See dkt. entry no. 460-11, Robinson Decl., Ex. O, Rice Dep. 256:13-20.) When asked if "there is any other reason for putting the primer and adhesive on the substrates," Dr. Rice answered, "[n]ot that I know of." (Id. at 257:6-9.) Although this is not an admission on behalf of Dr. Rice that Kimoto's adhesive drying process is a distinct part of the bonding process, Dr. Rice nonetheless confesses that the two are at least related.

C. Conclusion on Infringement

The Court holds that MacDermid's Digital CST plates do not infringe the '758 Patent. Digital CST does not contain every limitation contained in claim 1 of the '758 Patent because its dimensional stability is not controlled through a "special annealing process," as is required by the Court's claim construction. (See 3-15-10 Mem. Op. & Order at 40.) See Laitram Corp., 939 F.2d at 1535. Specifically, Kimoto's adhesive drying process is not a "special annealing process" that "controls" the "dimensional stability" of the substrate. Kimoto's adhesive drying, rather, is more properly considered a part of the process of bonding the

photosensitive elastomer layer to the substrate, a process that is explicitly excluded by the Court's construction of the '758 Patent. The Court therefore will grant MacDermid's motion for summary judgment of noninfringement. The Court will issue an appropriate order and judgment.

s/ Mary L. Cooper
MARY L. COOPER
United States District Judge

Dated: September 17, 2014